

REMARKS

This is intended as a full and complete response to the Office Action dated March 25, 2004, having a shortened statutory period for response set to expire on June 25, 2004. Please reconsider the claims pending in the application for reasons discussed below.

Claims 1-4, 6-15, 17-21, 23-31, 33 and 34 are pending in the application and remain pending following entry of this response. Claims 1, 6-7, 10, 15, 17-18, 23-24 and 27 have been amended, however, Applicant submits that the amendments do not introduce new matter. Consideration and entry of the amendments is respectfully requested.

Claims 1-4, 6-15, 17-21, 23-31 and 33-34 stand rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In response to the §112 rejections, Applicant first submits that the term "optimize", which the Examiner suggested was not sufficiently clear, has been replaced with the term "flatten" in all of the rejected claims except claim 28. The term "flatten" is described in Applicant's specification at least at paragraphs 5, 23, 27, 29, 31, 32, and 37, and Applicant submits that the description of the term within the specification clearly meets the requirements set forth in §112. With regard to claim 28, the term "optimize" has been left in the claim, as the term is defined within the claim itself, *e.g.*, "optimizing the pure value buffer by removing local node read only-type data from the pure value buffer." Applicant submits that claim 28 also meets the requirements of §112. As such, reconsideration of the §112 rejections pertaining to the use of the term "optimize" is respectfully requested.

Secondly, the Examiner also put forth §112 rejections with regard to Applicant's use of the phrase "eliminating remote/local node write/read only-type data" from the pure value buffer. Applicant submits that these steps are defined in the specification at paragraphs 23, 27, 28, 31, 32, 37, 72, and 73. Reconsideration of the §112 rejections pertaining to read and write data eliminations are respectfully requested.

Claims 10 and 27 stand rejected under 35 U.S.C. § 112, second paragraph. Applicant has amended claims 10 and 27 to remove the antecedent basis errors. Reconsideration and withdrawal of the rejection is respectfully requested.

Claims 1-4, 6-15, 17-21, 23-31 and 33-34 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Leach et al.* (US 6,108,715) in view of *Russell et al.* (US 5,617,570). The Examiner takes the position that *Leach* teaches a method for transmitting local node function parameters to a remote node for execution of the function on the remote node, including the steps of: associating a representation string with function parameters on a first stack, wherein each character in the representation string corresponds to a data type of an individual function parameter on the first stack; and dereferencing pointer parameters on the first stack.

However, the Examiner notes that *Leach* does not teach generating the pure value buffer, optimizing the pure value buffer, or transmitting the pure value buffer to a remote node. *Russell* is cited to as teaching generating a pure value buffer with function parameters and dereferenced pointer parameters, optimizing the pure value buffer, and transmitting the optimized pure value buffer to the remote node. Applicant traverses the rejection and respectfully submits that the cited combination of references fails to teach, show, or suggest each of the limitations recited in the rejected claims.

Applicant submits that *Leach* teaches a method and system for invoking remote procedure calls. The method of *Leach* includes creating a local stack for a remote procedure, mapping the local stack to the OS address space, and then copying the local stack to a remote procedure stack. The remote call is then executed on the remote node using the remote procedure stack. However, *Leach* does not teach, show, or suggest generating a pure value buffer, flattening or optimizing the pure value buffer, or transmitting the flattened pure value buffer to the remote node, as recited in independent claims 1, 11, 18, and 28.

Russell teaches server configured to execute client operation calls. The server of *Russell* includes a dispatcher, a plurality of worker tasks, and a dispatcher shared memory. In *Russell*, to invoke a remote procedure, a client process pushes parameters for the remote procedure onto its own stack and invokes the kernel of the operating system. The kernel copies the parameters from the client stack to the stack of the

server process that implements the remote procedure call. After the parameters are copied, the kernel invokes the remote procedure. When the server process completes execution of the remote procedure, it returns to the kernel. The kernel then transfers any output parameters from the server stack to the client stack. After transferring these parameters, the kernel returns to the client.

However, *Russell* does not teach, show, or suggest that the buffer/stack sent to the worker task is a pure value buffer. Rather, *Russell* indicates that the stack/buffer sent to the server contains real object pointers, virtual function pointers, a pointer to the signature table entry, etc. The server stack 668 is described as being generated so that it simulates the client stack, *i.e.*, contains the same pointers, etc. As such, *Russell* does not teach, show, or suggest generation of the pure value buffer recited in independent claims 1, 11, 18, and 28.

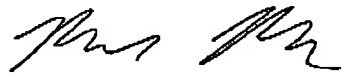
Further, *Russell* does not teach, show, or suggest flattening or optimizing a pure value buffer or transmitting the flattened or optimized pure value to/from a remote node. The buffers assembled and transmitted in *Russell* are unmodified, *i.e.*, *Russell* does not teach, show, or suggest removing local read only data from or removing remote write only data from the buffer prior to transmission, as recited in Applicant's claims. This flattening or optimization process reduces the buffer transmission size, and as such, increases the availability of system resources and reduces the transmission times. These aspects of the present invention are not contemplated by *Russell*. In fact, *Russell* teaches away from flattening or optimizing buffer contents prior to transmission, as *Russell* indicates that the required overhead associated with marshalling-type processes is to be avoided, as the overhead exerted is not worth the benefit gained. (See, column 1, lines 25-65.)

In sum, Applicant submits that the combination of *Leach* and *Russell* fails to teach, show, or suggest each and every limitation recited in independent claims 1, 11, 18, and 28. As such, reconsideration of the rejection of these claims, along with each claim depending therefrom, is respectfully requested. Having addressed each issue from the Examiner's action, Applicant submits that the claims in the present application are allowable over the cited art, and respectfully requests the Examiner's allowance of the claims.

Additionally, the secondary references made of record are noted. However, it is believed that the secondary references are no more pertinent to the Applicant's disclosure than the primary references cited in the office action. Therefore, Applicant believes that a detailed discussion of the secondary references is not necessary for a full and complete response to this office action.

Having addressed all issues set out in the office action, Applicant respectfully submits that the claims are in condition for allowance and respectfully request that the claims be allowed.

Respectfully submitted,



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